

AMENDMENTS TO THE CLAIMS

Please cancel claims 55 and 64 and add claim 69. Also, please amend claims 33, 35, 38, 39, 56, 60, 61, 65 and 68 as indicated in the following:

Claims 1-32 (Cancelled)

33. (Currently Amended) A process for production of a disintegration roll for use in separation of fibers in an open-end apparatus, said process comprising the steps of:

converting a shredding element into a preparative configuration that corresponds to a finished configuration the shredding element assumes on the disintegration roll;

hardening at least a portion of the shredding element while it is in the preparative configuration; and

using the hardened shredding element on a shredding element carrier created from a non-hardening material of the disintegration roll.

34. (Previously Presented) A process as in claim 33, wherein the shredding element is preshaped around a preshaping body to be converted into the preparative configuration, the preshaping body having a circumference essentially corresponding to the circumference of the disintegration roll.

35. (Currently Amended) A process ~~as in claim 34,~~ for production of a disintegration roll for use in separation of fibers in an open-end apparatus, said process comprising the steps of:

converting a shredding element into a preparative configuration around a preshaping body that corresponds to a finished configuration the shredding element assumes on the disintegration roll;

hardening at least a portion of the shredding element while it is in the preparative configuration;

using the hardened shredding element on a shredding element carrier of the disintegration roll; and

wherein the shredding element remains on the preshaping body during the hardening of said at least a portion of the shredding element.

23 36. (Previously Presented) A process as in claim 35, wherein the preshaping body is the shredding element carrier.

37. 3 (Previously Presented) A process as in claim 36, further comprising the step of grinding a working end of the shredding element which contacts the fibers.

23 38. (Currently Amended) A process as in claim 34, for production of a disintegration roll for use in separation of fibers in an open-end apparatus, said process comprising the steps of:

converting a shredding element into a preparative configuration by preshaping the shredding element around a preshaping body having a circumference essentially corresponding to the circumference of the disintegration roll;

hardening at least a portion of the shredding element while it is in the preparative configuration; and

using the hardened shredding element on a shredding element carrier of the disintegration roll; and

wherein the step of hardening the shredding element includes an induction procedure.

24 39. (Currently Amended) A process as in claim 38, wherein said induction procedure ~~include~~ includes use of a high frequency current.

40. ²¹ (Previously Presented) A process as in claim 39, ²⁴ wherein the step of hardening of the shredding element includes providing an alternating current to a working area of the shredding element at a frequency of more than 1000 kHz.

²⁶ 41. (Previously Presented) A process as in claim 40, ²⁰ wherein the alternating current is in a frequency ranging between 1500 to 2000 kHz.

⁸ 42. (Previously Presented) A process as in claim 33, wherein the step of hardening the shredding element is performed in a protective gas.

⁹ 43. (Previously Presented) A process as in claim 33, further comprising a step of heat treating the shredding element after hardening to relieve stress in the shredding element.

¹⁰ 44. (Previously Presented) A process as in claim 33, further comprising a step of blasting the shredding element with a particle blast after hardening.

¹¹ 45. (Previously Presented) A process as in claim 44, ¹⁰ wherein the particle of the particle blast uses glass as the particle.

¹² 46. (Previously Presented) A process as in claim 44, ¹⁶ further comprising a step of demagnetizing the shredding element.

¹³ 47. (Previously Presented) A process as in claim 33, further comprising a step of deburring the shredding element.

¹⁴ 48. (Previously Presented) A process as in claim 47, ³ wherein the shredding element is deburred by a chemical.

¹⁵ 49. (Previously Presented) A process as in claim 33, further comprising a step of coating the shredding element.

¹⁶ 50. (Previously Presented) A process as in claim 49, ¹⁵ wherein the shredding element is coated with a nickel-plating.

51.⁴ (Previously Presented) A process as in claim 37,³ wherein the grinding occurs on teeth points of the shredding element.

52.⁵ (Previously Presented) A process as in claim 51,⁴ wherein the teeth points of the shredding element are subject to a grinding in a direction counter to the operational direction of the teeth points of the shredding element.

53.⁶ (Previously Presented) A process as in claim 52,⁵ wherein the shredding element integral to the shredding element carrier is rotated in an opposite direction of rotation of a grinding disk used to grind the shredding element.

54.⁷ (Previously Presented) A process as in claim 52,⁵ wherein the shredding element undergoes no pre-hardening procedure before it is shaped.

55. (Canceled)

56.¹⁹ (Currently Amended) A process as in claim 55 33,¹ wherein the shredding element carrier is created from a low carbon steel.

57.¹⁷ (Previously Presented) A process as in claim 49,¹⁵ wherein the shredding element is plasma coated.

58.¹⁸ (Previously Presented) A process as in claim 57,¹⁷ wherein the plasma coating includes titanium nitride.

59.²⁰ (Previously Presented) A process as in claim 33,¹ wherein the shredding element is a sawtooth wire.

60.²¹ (Currently Amended) A disintegration roll for use in separation of fibers in an open-end apparatus, said disintegration roll comprising:

a shredding element carrier created from a non-hardening material having an outer circumference; and

a shredding element operably mounted to said outer circumference of said shredding element carrier, said shredding element being preshaped to conform to said outer circumference of said shredding element carrier and at least partially hardened in this preshaped form.

20 61. (Currently Amended) A disintegration roll ~~as in claim 60~~, for use in separation of fibers in an open-end apparatus, said disintegration roll comprising:

a shredding element carrier having an outer circumference;

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a shredding element operably mounted to said outer circumference of said shredding element carrier, said shredding element being preshaped to conform to said outer circumference of said shredding element carrier and at least partially hardened in this preshaped form; and

wherein said shredding element is hardened by an induction procedure.

28 62. (Previously Presented) A disintegration roll as in claim 60²⁷, wherein the shredding element is coated with a nickel-plating.

29 63. (Previously Presented) A disintegration roll as in claim 60²⁷, wherein the shredding element undergoes no pre-hardening procedure before it is shaped.

30 64. (Canceled)

30 65. (Currently Amended) A disintegration roll as in claim [[64]] 60²⁷, wherein said shredding element is preshaped on the shredding carrier element carrier and hardened on said shredding element carrier.

31 66. (Previously Presented) A disintegration roll as in claim 60²⁷, wherein the shredding element is plasma coated.

31 67. (Previously Presented) A disintegration roll as in claim 60³¹, wherein the plasma coating includes titanium nitride.

68.

(Previously Presented) A disintegration roll as in claim 60, wherein the

shredding element is a sawtooth wire. [[—]]

69.

(New) A process as in claim 60, wherein the shredding element is
deburred by a chemical.